



**TANKER AIRLIFT CONTROL ELEMENTS (TALCEs) AND CONTINGENCY
RESPONSE UNITS (CRUs): DOES AIR FORCE OPERATIONAL DOCTRINE
NEED TO CHANGE?**

GRADUATE RESEARCH PROJECT

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AFIT/GMO/ENS/01E-15

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Karen D. Stoff

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Abstract

The Air Force has created Contingency Response Units (CRUs) without fully exploring the ramifications such units could have to existing air mobility support doctrine. The purpose of this paper is to determine if the Air Force should change its operational level doctrine about the support of mobility air forces. Various issues are addressed in the paper to develop a conclusion, specifically, the capabilities of both types of Mobility Support Forces (MSFs) in the form of the CRU and Air Mobility Command Tanker Airlift Control Elements (AMC TALCEs), the reasons behind the development of the CRUs, and possible alternate solutions for MSF force structure. Research consisted of a Delphi Technique to collect data in the form of interviews with selected experts familiar with the CRU issues from various Air Force Major Commands. The paper concludes that Air Force operational level doctrine does need to change, however, Air Force leadership must determine first both a strategy and structure for MSFs. Only if this is accomplished will the confusion about the roles of MSFs in the CRUs and AMC TALCEs be eradicated.

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Chapter 1: Background and Statement of the Problem

General Background

It is common knowledge that the number of contingency operations requiring military support has increased steadily over the past few years. These events ranged across the spectrum of conflict from combat operations to humanitarian relief operations to assist refugees, internally displaced personnel and hurricane victims. Some of the military taskings even included out-of-the-ordinary support operations, for instance, transporting a whale so it could be released back into its arctic ocean environment, an operation not truly military in nature, but one which tossed mobility air forces (MAF) into the national limelight. In some of these events, the MAF were called upon to provide a quick response, and most, if not all, of these movements were considered successful in the context that theater commander-in-chief (CINC) mission objectives were accomplished.

Clearly, “Mobility Air Forces provide the National Command Authorities (NCA) the capabilities to project power and sustain forces” (2:1). The CINC of United States Transportation Command (TRANSCOM) is appointed as the single manager of the defense transportation system (DTS) and owns forces to operate this system to move

people and equipment around the globe. This responsibility is not just to manage forces for strategic movement around the world, but it also includes the responsibility to augment theater airlift movement requirements, usually while retaining Operational Control (OPCON) of those augmenting forces “in order to execute the nation’s two MRC [major regional conflict] security strategy if called upon” (3:21). To successfully use the one part of the DTS called the MAF, a Global Air Mobility Support System (GAMSS) is established and maintained to “enable the deployment, employment, sustainment and redeployment of air mobility forces throughout the spectrum of military operations” (4:57). The GAMSS is “a set of permanent support locations and deployable units capable of augmenting the permanent locations or creating support locations where none exist” (2:2). The permanent locations, managed by Air Mobility Squadrons (AMSS), are situated around the globe and make up Air Mobility Command’s (AMC’s) en route structure. The deployable units, called Air Mobility Operations Groups (AMOGs) are stationed at Travis AFB CA and McGuire AFB NJ. “Collectively, the capabilities of the en route structure and deployable units allow airlift and air refueling forces to increase operations at existing locations or, by using the global reach laydown (GRL) strategy, initiate operations at austere locations” (2:2).

GRL strategy rapidly deploys GAMSS units “to establish operations anywhere in the world where little or no en route structure exists...to enable seamless air mobility operations that coordinate and synchronize inter-theater and intra-theater operations” (2:2). Some functions of the deployable units are to establish air mobility operations at a base to receive inbound cargo and personnel, to conduct airfield surveys for future/pending operations, and to initiate Host Nation support. The AMOGs are the

largest and most diverse aspects of the GAMSS with cross-functionally trained elements to “deploy as self-sufficient units capable of sustained operations up to 30-days without base operating support...” in order to execute GRL strategy (2:16). Those cross-functionally trained elements are Tanker Airlift Control Elements (TALCEs) and Mobile Support Teams (MSTs).

In the Joint Tactics and Procedures for Airlift Support to Joint Operations publication, airlift management is described as a shared responsibility. “[CINC TRANSCOM] and the geographic combatant commanders are responsible for the organization and operation of their respective airlift command and control systems” (5:Sec I, 6). Deployable mobility support elements provide the capability to effect command and control at an austere site for geographic combatant commanders. Since GAMMS units are owned by TRANSCOM, there has been a historical complaint that a centrally managed airlift system is unresponsive to overseas commanders’ needs (3:9). What has emerged is a theater-owned unit, called a Contingency Response Group (CRG), to provide TALCE-like, as well as other, capabilities at the discretion of the theater CINC. Furthermore, this unit deploys as a recognizable unit, from a single base with members cross-trained in multiple disciplines, to perform a specific unit capability...not as an ad hoc unit comprised of members, from a myriad of bases, capable of only performing functions specific to their Air Force Specialty Codes (AFSCs) (6:4). The only fully developed unit to date is in the United States European Command (EUCOM) theater, managed by United States Air Forces Europe (USAFE). “The 86 CRG mission is to train, equip, and deploy with speed, precision, and lethality USAFE’s initial, first-on-the-scene operational and support force to assess and prepare a staging base for USAFE’s

Area of Interest” (7:4). The CRG is an entity totally separate from the infrastructure of the GAMSS, yet it has the capability to provide some command and control of airlift, specifically, airlift dedicated to support that theater’s operations.

Problem

With the establishment of the CRG comes a perception of redundancy, a sense that theater commanders are building units to provide a capability (airlift support) when that capability already exists within TRANSCOM’s GAMSS as TALCEs. One school of thought maintains that current doctrine, the GAMSS, provides quick and effective support to theater CINCs. An opposing school of thought supports the establishment of a CRG because it adds elements of flexibility and quick response, key components to an Expeditionary Air Force (EAF), to theater CINC courses of action when responding to a crisis. According to General Jumper, former commander of USAFE and current commander of Air Combat Command (ACC), “The requirement for the CRG capability is not unique to USAFE; we believe this capability is fundamental to the entire Air Force” (6:9-10). What has emerged is a tasking from Headquarters Air Force to all Major Commands (MAJCOMs) to research the advantages and disadvantages of each theater having its own Contingency Response Unit (CRU), a standardized, theater, first-response unit, while defining the exact purpose and mission of that CRU. What has been left out of this tasking is the exploration of the possible ramifications such a unit could have to existing air mobility support doctrine. Current doctrine, GAMMS, goes into great detail about the infrastructure designed to provide support to MAF; however, it does

not address how to incorporate theater airlift support systems into the already established support structure.

To clarify terminology used throughout this paper, the CRG is a unit already established by USAFE. The acronym CRG will only be used when referring to that unit. The CRU is a conceptual unit and will be used for a more abstract, generic unit (for example, the CRG is a CRU). CRUs will be structured to provide TALCE-like capability. When referring to existing TALCE capabilities found in AMC's AMOGs, they will be called AMC TALCEs as opposed to CRU TALCEs.

Based upon the emergence of new units (CRG) and concepts (CRU), should the Air Force change its operational level doctrine about the support of MAF, and if so, how should the doctrine be changed to best meet the requirements of the Expeditionary Air Force? This research question is the focus of this paper. In order to fully explore this question, five other questions need to be addressed. First, what are the capabilities of the units in question (the AMC TALCEs, CRG, and CRUs)? What do each of them provide to the warfighting CINC? What are the key reasons driving change to current doctrine? What are the different possible unit structures which could provide more capability to the CINCs? Finally, what is the best solution to align MAF support doctrine with the Expeditionary Air Force doctrine?

Chapter 2: Literature Review

Introduction

To build a better understanding of the issues relevant to the research topic, a bit of background theory must be explained in this chapter. The issues of emergent organizations and changing doctrine in the military equate to the organizational structure theory in business of strategy versus structure. Since it is important to know why such an organization as the CRG was developed, a description of one of the more basic aspects of Transaction Cost Economics will provide one possible explanation to the motivation to create a new, somewhat redundant, capability in a theater. Furthermore, the missions, capabilities, limitations, and command relationships of each of the units affected by this research will be explained to provide a foundation to build off of during the research analysis in Chapter 4. Finally, the definitions of the various levels of command relationships will be described in detail, to include the current disagreements on those definitions within the doctrine development community.

Strategy Versus Structure

Alfred D. Chandler, Jr. studied strategy versus structure and its effects on the evolution of different large businesses (8). In his case studies of the histories of those businesses, he determined that not only are the changes in organizational structure related to the expansion of corporations, but also “unless structure follows strategy, inefficiency results” (8:3, 314). Terry Amburgey and Tina Dacin tested Chandler’s conclusions about strategy and structure and supported his view (9). Although Chandler’s belief is one of

the more prominent management tenets, other experts in the field, such as Henry Mintzberg, differ in their thoughts about the relationship and importance of strategy and structure in organizations.

Strategy Before Structure Viewpoint. The research question for this paper mirrors a common perception that the creation of the CRU (structure) is driving the Air Force to change the way it “conducts business” (strategy), a pattern completely opposite of what Chandler deemed to be effective. One of his case studies, Standard Oil Company New Jersey (henceforward called Jersey Standard), traced the evolution of an organization in which it seemed that structure did not follow strategy. The following is a summary of that case study.

As some background, entrepreneurs are defined as executives who allocate available resources and make macro-level decisions about their enterprise, somewhat like flag-level officers at headquarters units in the military (8:11). Managers are those who develop plans using those allocated resources, thinking on a more operational or micro-level (8:11). In the business world, changes in strategy are usually “in response to the opportunities and needs created by changing population and changing national income and by technological innovation;” furthermore, failure to respond by creating a new structure is “a consequence of overconcentration [sic] on operational activities by the executives responsible for the destiny of their enterprises, or from their inability...to develop an entrepreneurial outlook” (8:15). To equate that to the military, a change in doctrine, and thus a change in organizational structure, would happen because the national military strategy changed. Failure to develop a new structure based upon the

new strategy would be due to senior leadership concentrating more on unit-level issues as opposed to total force issues.

At Jersey Standard, between the years of 1912 and 1930, the company added new functional departments due to expansion in resources, equipment and personnel; this expansion added layers and layers of administrative units to the corporate structure, increasing the difficulties in planning, coordination, and appraisal of activities both in and between departments; in other words, the operational level of business became more complex (8:171). Because these structures were so complex, they were “interfering with long-term entrepreneurial planning and appraisal,” meaning, the structures were driving decisions about strategy (8:181). Finally, an inventory crisis occurred before the corporate entrepreneurs/executives gained enough clarity about their failure to apply new strategy by changing the company structure (8:185). It took 13 years of haphazard structure additions in response to operational level problems before executives reigned in the corporate machine, defined their long term strategies, and built a structure to meet the objectives set forth in those strategies (8:284-309).

There is an interesting correlation to what happened at Jersey Standard to what is currently happening in the Air Force in regards to the CRU concept. The National Military Strategy and Air Force doctrine have not changed, yet an operational level unit has been created in response to an operational level need. Has the entrepreneurial level strategy changed or evolved, and in response, an operational level change occurred? Or, did operational level managers respond to changing needs and create a new unit as did Jersey Standard? In either case, Air Force doctrine needs to be examined to ensure it clearly sets forth guidance about conducting operations so the appropriate structures can

be developed. Otherwise, operational level managers will continue to build layers of organizations that make communication and cooperation between units so difficult that severe inefficiencies will eventually lead to failure, as it did at Jersey Standard.

Other Viewpoints. Amburgey and Dacin conducted a study to determine causality between strategy and structure by analyzing the dynamics of change (9:1427). Their study supports the fact that there is a contingency relationship between strategy and structure; changes in strategy cause structural changes, and structural changes cause changes in strategy. However, “strategy is a much more important determinant of structure than structure is of strategy” (9:1446). Of the two “variables” of strategy and structure, strategy seemed to be the stronger variable because changes to that variable were more likely to cause changes to structure, and the changes in structure occurred at a much faster rate (9:1446). To sum it all up, their conclusions supported Chandler.

While presenting the application of the design school model to strategic management, Mintzberg questioned the hierarchical relationship of strategy and structure. “No ongoing organization ever wipes the slate clean when it changes its strategy. The past counts, just as does the environment, and the structure is a significant part of that past...Structure may be malleable, but it cannot be altered at will just because a leader has conceived a new strategy” (10:183). Here, Mintzberg asserts that structure has equal influence over strategy, and when a manager wishes to change one, they cannot discount the other.

Using the above two ideas about strategy and structure for this paper’s research question clarifies the Air Force’s dilemma. One school of thought points to a concept that changing strategy to effect structural changes is “stronger” and could lead to a faster

overall change and integration. Another school of thought points to the concept that strategy and structural changes are continually evolving, feeding off of the other as the organization moves to better efficiency by learning from past mistakes. Where does the CRU fit in all of this? What approach is best to answer the research question? That is the purpose of this paper.

Transaction Cost Economics

When new units are created, it is assumed that there was a good reason, although sometimes that reason is not clearly communicated. Sometimes, a perfectly good explanation is given, yet it leads people to wonder what event was the catalyst to change or create an organization. In the case of the CRG, the unit was created to provide the CINC a quick response capability to establish an air base in an austere environment for combat beddown or humanitarian relief operations. Since that the quick-response MAF support capability already exists with AMC TALCE units, people wonder why the CRG was created with embedded MAF support capabilities. One concept of Transaction Cost Economics (TCE) explains a possible reason for creating a unit with similar capabilities.

In TCE theory, when exchanges between firms become too numerous, uncertain or complex, a new organization is formed to reduce the costs associated with doing business, or transacting, with one another (11). In this sense, costs could range from monetary form, to time and even stress. If a supplier firm has a history of unreliable delivery rates, the demand firm could decide the cost of uncertainty is too high and create an internal function which produces the supplies needed, thus eliminating the need to deal with that sub-standard supplier firm. Also, when one firm thinks its supplier firm has

some sort of monopolistic advantage that drives up costs, it will internalize the transactions the supplier firm performs to eliminate those costs (12:4). This is an issue of trust. When a firm transacts with another, the firm assumes the other is out to gain something out of the transaction at the expense of the firm, resulting in distrust and the building of defense mechanisms to protect the interests of the firm and keep costs down (13:12). The costs of building defense mechanisms, and even of creating an internal unit to provide the same services, would be unnecessary if only each party to the transaction trusted the other (13). The bottomline to TCE is, “transactions will be organized in the firm when the cost of doing this is lower than the cost of using the market” (14:288).

Quite possibly, TCE could apply to the emergence of the CRG in the EUCOM theater. Consider response time a cost. In a hypothetical situation, in order to get an AMC TALCE to an austere location in eastern Europe, the CINC has to request the capability through TRANSCOM. TRANSCOM tasks the Air Mobility Command (AMC) Tanker Airlift Control Center (TACC) to manage the request, and the TACC tasks the AMOG at McGuire as well as supporting airlift out of Charleston AFB SC. The airlift arrives at McGuire, the AMC TALCE personnel and equipment load, and after a remain overnight (RON) at Lajes AB, Azores, for fuel and crew rest, the AMC TALCE finally arrives at the location in eastern Europe. This process consumes quite a bit of time, days even, something unacceptable to a CINC during a highly volatile situation in which a speedy US presence is required. To compensate for this potential cost of time, EUCOM created the CRG with the same capabilities as an AMC TALCE and located it in the theater so it could be quickly transported to that base in eastern Europe by using the C-130 theater assigned airlift which are also located at the same base as the CRG.

The tasking scenario using the CRG would be: the CINC tasks its air component command, USAFE, to respond, USAFE tasks the CRG and C-130s at Ramstein AB, Germany, and after the unit loads onto the C-130, arrives at the location in eastern Europe. This response is narrowed down to hours, not days.

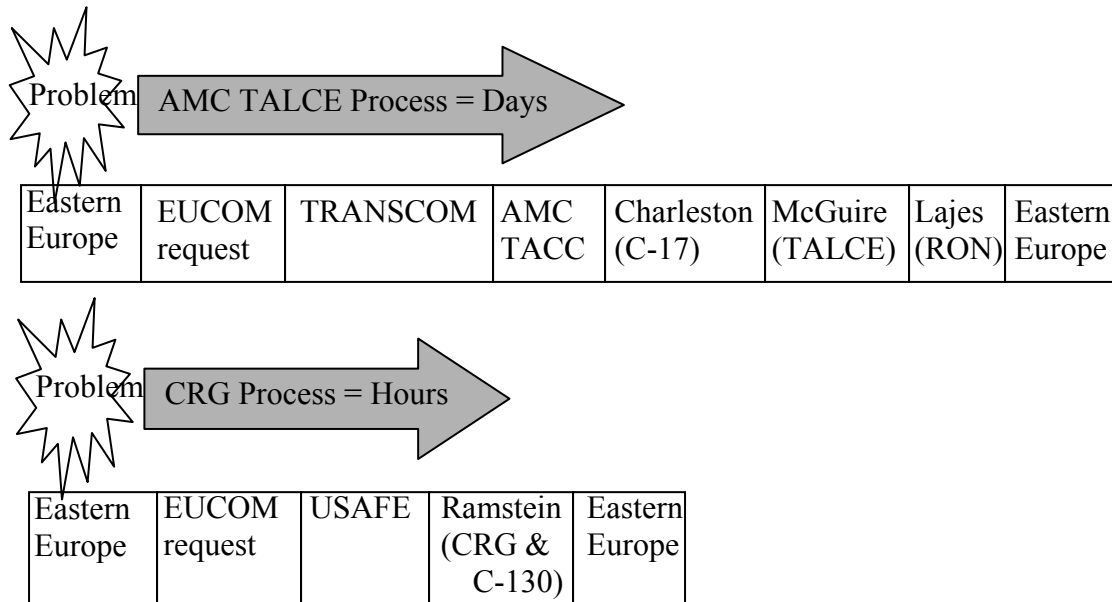


Figure 1. Response Time Hypothetical Situation Illustration

Now consider uncertainty a cost. It could be that at some point in the past, EUCOM requested AMC TALCE support from TRANSCOM, and due to other higher priority operations around the world, TRANSCOM didn't provide the exact capability that EUCOM wanted. This could create a sense of mistrust on the part of EUCOM about the supplier "firm" of TRANSCOM. Added to a perception of a monopoly (because TRANSCOM is the only provider in the Department of Defense [DoD] of TALCE capabilities) EUCOM could have decided the costs are too high which prompted the

creation of a unit with those TALCE capabilities within its “firm.” Again, using the TCE theory to understand why some firms integrate capabilities that can be found in the market could help make sense of some of the possible underlying issues that contributed to the creation of a new unit in the EUCOM theater and in the Air Force.

Missions, Capabilities, Limitations, and Command Relationships

TALCEs. Mobility Support Forces (MSFs) include both TALCEs and MSTs. The difference in the two is size and throughput capability; a TALCE is larger, can handle more aircraft, and is commanded by an officer, whereas an MST is a small core of personnel to handle a few aircraft and is led by a senior non-commissioned officer. MSFs are deployed in many different configurations based upon the nature of the operation, the location’s support capabilities, and operating environment, as directed by the TACC (5:Sec II, 3). TACC deploys these forces to act as forward agents for TRANSCOM in order to provide an interface with the customer at deployed locations and to ensure the base can support mobility operations (5:Sec II, 3). “Whenever there is a need to provide enroute support to airlift forces and in-place facilities are not available or sufficient, a TALCE or MST is deployed” (5:Sec II-3). AMC TALCEs are sized based upon projected support requirements and are intended to be a temporary organization (4:60). AMC TALCE capabilities include: command and control, aerial port passenger and cargo processing, aircraft servicing, and limited aircraft maintenance; when deployed as a full AMC TALCE, their airlift aircraft throughput is a Maximum on Ground (MOG) of 12 parked aircraft and an MST’s MOG is 4 (2:17). AMC TALCEs and MSTs are capable of reaching initial operating capability no more than 4 hours following their

arrival at the offload location; when notified to deploy with no advance warning, they can start receiving initial airlift at the offload site in as little as 40 hours after an Execute Order is delivered (the time changes based on the theater and offload site location), and if there is warning, they can start operations within 26 hours (15: Sec IV, 1-2). MSFs usually deploy early in an operation which may consume a large portion of the initial airlift missions of an operation, a necessary compromise of priorities:

Not only must GAMSS forces deploy quickly; [sic] they must deploy first—prior to the main flow of forces. This force sequencing enables supported forces to immediately swing to follow-on missions because essential support infrastructure for the operation is already in place. To work properly, GAMSS forces must preposition themselves at key locations outside the theater prior to the deployment of forces—usually upon receipt of the JCS alert order. (4:58)

Most GAMSS units are assigned to TRANSCOM, and usually remain under TRANSCOM's Operational Control (OPCON) (2:11).

CRG and CRU. The 86th Air Mobility Squadron (AMS) provides the MSF portion of the USAFE CRG. It's mission is "to provide first-on-the-scene air mobility support and airfield terminal operations to include rapidly deployable C3, mobile aerial port, and aircraft maintenance to expedite and facilitate reception of expeditionary aerospace forces (AEF) [sic.] deploying in response to any contingency in USAFE's AOI" (7:9).

Furthermore, the 86 AMS can deploy within 12 hours of notification, and "must be capable of entering an operating area whether overland or by airlift airland insertion" (16:9). The size of the MSF is tailored based upon the operation and will consist of enlisted personnel only (16:6). Members of the MSF may be a part of a small, core team of the CRG which deploys within 2 hours of notification, but once the full MSF force deploys as a part of the CRG, "follow-on aircraft offload capability and aerial port

operations are ready within 20 minutes” (7:11). The CRG will be a part of the new Air Force Contingency Response Unit (CRU) concept. The CRU formalizes the theater quick-response unit concept and includes the PACAF CRG, USAFE CRG, Lead Mobility Wing Initial Response Team (augmented by an AMC TALCE), and 820th Security Forces Group (17:4-9). Under this concept, AMC TALCEs will augment theater CRU MSFs if required, and will support intertheater airlift supporting the theater operation (17:4-9).

Command Relationships Definitions and Issues

Understanding command relations between forces is necessary so commanders know exactly how they can use certain units to support their mission tasks. Sometimes those command relationships are easily defined; however, when dealing with MSFs, distinguishing whom the “boss” is can be difficult. As a rule of thumb, “the primary emphasis in command relations should be to keep the chain-of-command short and simple so that it is clear who is in charge of what” (18:6).

Operational Command (OPCON) is “the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission” (19:Sec III, 8). A commander with OPCON can organize forces, move forces, and employ those forces as he or she feels fit in order to accomplish missions as prioritized by that commander (19:Sec III, 8). For example, TACC has OPCON of AMC TALCE units around the world, so in case a mission of higher priority is tasked, TACC can re-task and move those AMC TALCE units to

accomplish the higher priority mission. If TACC gives OPCON of an AMC TALCE unit to a theater CINC, TACC would not have that AMC TALCE for that higher priority mission. Likewise, the theater CINC with OPCON of that AMC TALCE can move it to any place in his or her theater that is deemed necessary to meet mission priorities within that theater, regardless of the overarching TACC GRL strategy which might count on that AMC TALCE to be in a certain place in the theater. AMC TALCE movements are not planned in a vacuum; TACC decisions to move and position AMC TALCEs are based upon the theater and strategic air mobility requirements stated by the geographic CINC during the initial planning phases of an operation (5:Sec II-11).

Tactical Control (TACON) is the next level of command authority that is “limited to the detailed and usually local direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks...it does not provide organizational authority or authoritative direction for administrative and logistic support” (19:Sec III, 9-10). TACON gives a CINC the capability to direct the operation of a unit to meet mission objectives, but a commander with TACON cannot order a unit to move from one location to another, only the commander with OPCON can do that. Using the above examples, if TACC retains OPCON and delegates TACON to a theater CINC, TACC directs where an AMC TALCE will move to in the theater while the theater CINC directs the mission priorities of that AMC TALCE. AMC TALCEs can deploy to support strategic and/or theater air mobility operations, and when deployed to support only theater operations, “may be attached to the command of a geographic [CINC]” (5:Sec II, 11). In other words, TACC will delegate TACON to a theater CINC if the AMC TALCE will be providing mainly theater support, which is happening more and more often.

An overarching principle when designing command relationships is that “all forces operating within the geographic area assigned to a combatant command shall be assigned or attached to and under the command of the commander of that command” (19:Sec III-4). This leads to quite a bit of debate when it comes to deploying AMC TALCE forces into theater. TACC wants to retain OPCON because it needs the latitude to redirect forces in order to manage the global transportation network that supports all CINCs at all times. Theater CINCs want OPCON of those AMC TALCE forces deployed into their theater so they can move those forces about as needed in the theater to maximize the capability to receive forces as the battlefield changes. A commander with OPCON can reposition forces, accepting the level of risk necessary to execute his mission that occurs by moving those forces; however, a commander with TACON cannot position forces and “can find himself with the responsibility for the mission, but without the necessary authority to accomplish that mission” (20). A lot of confusion arises because the definitions of OPCON and TACON are so similar, and there is currently debate as to how those definitions should change to make their differences more clear cut. The Air Force Doctrine Center (AFDC) maintains that OPCON, not just TACON, “should go forward to the commander charged with accomplishing the operational mission,” in other words, to the theater CINC (20). The AFDC says TACC’s practice of delegating TACON to a theater CINC instead of OPCON is not doctrinally correct:

“TACON is inherent in OPCON. The implication of this is that both the commander with OPCON and the commander with TACON must be in the same chain of command...[TACC] cannot pass TACON outside the chain of command without improperly breaking the inherent link in the chain between OPCON and TACON.” (20)

Ultimately, “the commander with responsibility for the operational mission must be given the requisite levels of authority to carry out that responsibility” (20).

AMC’s response to the AFDC was:

“When forces are attached to a Combatant or other operational commander for dedicated use over a period of time, OPCON usually makes sense. But, when attachments are expected to be of shorter duration, for limited and/or specific usage, and/or a commander does not need the full ‘care and feeding’ responsibilities incumbent in OPCON, TACON should be the preferred command relationship.” (21)

In this sense, TACON is like a rental contract because a commander gets specific use of forces for a specific amount of time (22:4). Furthermore, since OPCON transfers require many levels of coordination, “TACON transfers likely will be quicker in relation to the pace of unfolding requirements” (21). AMC defined two specific criteria that must be met in order to justify transferring TACON of forces to a CINC:

“First, the gaining commander requires and is able to exercise detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks. Second, CINC TRANSCOM determines that the transfer of TACON will support an appropriate apportionment of mobility capabilities between the global functional mission of [TRANSCOM] and the geographic general mission of the gaining command.” (23)

In other words, the CINC must be able to provide direction to the deployed units, and the absence of the unit from the MSF of MAF does not detract from the capability of TRANSCOM to meet all transportation requirements. Because of these criteria, theater CINC’s believe it is easier to have their own MSF units, to use at will, to ensure full support of their missions. The issue of OPCON and TACON of MSFs is a key component to the emergence of the CRU and will be a large consideration in answering the research question.

Chapter 3: Methodology

The research design is a hybrid of methods. The first part of the research question requires a panel of experts to decide if a change in doctrine is needed and to provide ideas about possible solutions. The second part of the research question requires data analysis to develop a course of action for doctrine development. Both of these methods bring their own specific threats to the research.

Research Design

Case study research is commonly used to build theory. To initially design the research, a well defined and relatively narrow research question must be developed to guide research; furthermore, constructs must also be built even though both the research question and constructs may shift during the course of the research (24:535-6).

Application of the case study method involves defining each case and performing some type of observation or interview on that specific case. The strength in case study research to build theory is that its free-form allows for a deep exploration of constructs so that a fresh theory can be developed; however, the strength of that emergent theory in terms of internal validity and generalizability is dependent upon how well that emergent theory can be tied to existing literature (24:545).

The research design began with defining the research question. From that research question, some questions were formed to create the research interview questionnaire which was approved for distribution by the Air Force Personnel Center under Interview Control Number SCN 01-008 (see Appendix A). Each Air Force Major

Command (MAJCOM) that could possibly have its own CRU (or act as a CINC's Air Force Component Command) would be a case which would ensure generalizability of the emergent theory from the research. These questions were open-ended to allow interviewees the opportunity to expand on those topics in which they were more familiar and to allow them to postulate their own theories. The questions were designed to establish levels of expertise on the subject matter and determine the validity of their inputs, to explore the reasons why different units have been created and draw a parallel with the literature on strategy versus structure and TCE, and to allow each expert to provide input on their vision of what doctrine should be. To ensure frank and open responses, the panel of experts was told their responses would remain anonymous. Although every effort was made to establish a face-to-face meeting for the interview, telephone interviews and e-mail responses to the questionnaires were used to collect data. The Delphi technique was used for data collection within the case study method.

The Delphi technique solicits the viewpoints of experts; their viewpoints are then compared to delineate any common ideas that could be used in theory building (25). The viewpoints are usually combined and then passed around to the same experts for a second opinion (25). The number of experts to choose from was limited because, aside from the members of the AMC TALCE and CRG units, very few personnel work in offices that directly deal with the units and issues this research investigates. Therefore, the experts were those individuals appointed by their respective MAJCOMs to work on the CRU development, as well as on CRG and AMC TALCE issues, both operationally and doctrinally. These individuals usually worked in the plans and programs offices in the plans and/or operations directorates of their MAJCOMs.

Interviewee Demographics

The panel of experts were from four different MAJCOMs, and either worked in a headquarters/staff job that dealt directly with AMC TALCEs, CRUs, and the development of policy for those units, or had just finished a tour in such a job. Of the ten respondents, only two had just moved out of such a job (within 6-months). The four MAJCOMs were selected because two already have a CRU (USAFE and PACAF), one is considering developing one (ACC), and AMC owns the TALCEs; all have a part in the research issue of this paper. Table 1 summarizes the demographics.

Table 1. Respondent Demographics

MAJCOM	USAFE	PACAF	ACC	AMC
Number of Round 1 Respondents	2	2	1	5
Number of Round 2 Respondents	1	1	0	3

All respondents were field grade officers, and half held the rank of Colonel. Also, all respondents were rated officers. The range of experience varied and most were very familiar with only one type of unit, either an AMC TALCE or a CRU. However, their responses indicated that they had enough knowledge of at least one of the units to answer the questions with credibility. Table 2 summarizes the respondent comments about their knowledge of TALCE and CRU operations and doctrine. The comments were pulled directly from the interviews and are arranged in random order to maintain anonymity. A scale to quantify levels of knowledge about TALCE and CRU operations/doctrine was developed and these comments were assigned a value based upon that scale. These

values indicate that most respondents had a stronger knowledge about one unit than the other. Interestingly, when the values were tallied, the score for TALCE knowledge versus the score for CRU knowledge was equal, indicating an equal amount of expertise on both units. All in all, the knowledge levels of the respondents were more than sufficient for credibility, and all respondent interviews were used for data analysis.

Table 2. Respondent Expertise

Respondent Expertise Description	Score	
	TALCE	CRU
TRANSCOM/AMOCC experience, familiar with TALCE doctrine, familiar with CRU operations but not doctrine	3	2
Worked in AMOG/TACC, worked coordination of AMC support to CRU operations	3	3
Limited TALCE experience, very familiar with CRU	2	4
Very familiar with/worked in TALCE, read CRU CONOPS	4	1
Worked TACC/AMOCC, wrote AFDD 2.6 series, worked CRU issues/doctrine	4	4
AOC experience, limited TALCE experience, general knowledge of GAMSS, worked CRU CONOPS development	2	4
TALCE/CC, TACC, wrote JP 4.0, very familiar with GAMSS, worked coordination of AMC support to CRU operations	4	3
Limited TALCE knowledge, read documents/talked with HQ elements, worked CRU issues	2	4
Very familiar with TALCE doctrine, familiar with CRU operations	4	3
Not familiar with TALCE/CRU operations, read doctrine and CONOPS, limited knowledge	2	2
TOTAL	30	30

Scale	
Score	Description
0	Unfamiliar, no knowledge
1	Read doctrine, attended classes, talked with people
2	Limited knowledge
3	Some knowledge, familiar, worked with units in TACC/AMOCC
4	Very familiar, worked in units, wrote doctrine/CONOPS

Threats

One of the most obvious threats to the case study method is limited generalizability because the unique characteristics of each case will cause difficulty in developing one single theory that meets the needs of each case (26). Setting, population, or history pose threats to external validity (27:206). To control this threat, when the theory is built based upon all case study inputs, it must be assessed to see if it holds true for all cases. The setting was controlled as much as possible by conducting most of the interviews in an office setting by the same interviewer. Plus, the panel of experts were only those individuals who have had, or currently have, some play in the development of operational plans or doctrine in order to minimize threats to external validity (27:209).

Every effort was made in the development of the interview questions to eliminate bias; however, because the full backgrounds of the experts were unknown until the time of the interview, filtering interviewees to validate their “expertise” was nearly impossible and some interviewees may have responded differently to the questions based upon their experience. Also, the validity of the interview questions could be at risk due to their open-endedness. Although case study research allows for the use of open-ended questions to spark the addition of new ideas into the theory building process, the questions could be construed as non-neutral in nature and produce bias. Added to this, interaction with the interviewer during the interview could produce some bias, based upon ease of rapport, appearance, and attitude perceptions (27:142). Finally, construct validity is an issue with qualitative research, especially when interviews are used as a measurement tool (27:272). Because the researcher uses “feelings, curiosity, hunches and intuition” to guide the interview and ultimately combine the results into a theory,

there is no set instrument to use in later research of the same topic other than that same researcher (27:272). In other words, if another interviewer asked the same panel of experts the same questions, that interviewer could arrive at different conclusions from the original interviewer because of subjective analysis differences. Ultimately, the interviewer must maintain a sense of neutrality when interviewing and analyzing the data, to avoid biased decisions based upon feelings of loyalty to one panel expert's opinions.

Use of the Delphi Technique adds some potential threats. Panel members must be kept separate in order to “decrease the influence of group psychological effects” (25). The beauty of the Delphi Technique is that each expert's opinions are taken and molded into a theory based upon all expert opinions. Placing those experts in a group setting could discourage some from speaking up or even encourage those of differing opinions to agree to a more neutral opinion in the spirit of cooperation. Researcher bias is also a problem, because as each expert is interviewed, the researcher can be swayed to accept the latest opinion as the most correct opinion (26). Finally, generalizability problems can exist, so each panel member must be asked the same questions, and for each question, the responses must be analyzed from every expert in order to draw the “best” answer for that particular question (25). Overall, the research design tries to minimize the effects of these possible threats by holding one-on-one interviews using a standard baseline questionnaire to guide the discussion. Awareness of this potential bias during analysis controlled researcher bias.

Chapter 4: Data Description and Analysis

Process of Data Analysis

Using the Delphi Technique, a total of two rounds of data collection occurred. The process for analyzing the data evolved once all ten, first round, interview responses were received. To ensure a clear focus on the research question, data evaluation focused on the airlift support functions of the CRG/CRU and AMC TALCEs. Evaluation after the first round yielded three categories for data assessment. The second round provided an opportunity to assess specific data items.

After round one, 73 key points (data) were pulled from the interview responses, assessed, and grouped into common “themes.” These themes were not predetermined; but were developed using a subjective process with the intent to logically group the data for discussion. Out of this process, three broad themes emerged, purpose, capability, and solutions, which were sub-categorized for in-depth analysis and summarized in Table 3. The analysis of round one data includes excerpts from the interviews which are annotated by quotations marks without citations (in order to maintain anonymity). During analysis, four critical concepts appeared to be the basis of all arguments. These critical concepts came from recurring statements in the data, and seemed to be much more important than the themes used for structuring the analysis. In other words, purpose, capability and solutions were descriptors of the type of data, whereas the critical concepts were key issues behind the controversy of the creation of the CRUs. For this reason, the critical concepts were pulled from the round one data and used for analysis during round two.

To start round two, the same 73 key points were grouped by question and sent back to the respondents to offer them a chance to either change or clarify their original answers. Responses to round two were not mandatory, and upon solicitation for round two inputs, respondents were told that failure to respond would imply their agreement with round one inputs. Five out of the original ten respondents provided feedback during the second round. Again, the analysis of round two data includes excerpts from the interviews which are annotated by quotations marks without citations (in order to maintain anonymity). The responses out of the second round were categorized into the critical concepts developed during round one analysis. When respondents replied to round two, their clarifications focused on the four issues that had previously emerged as the critical concepts although none of them knew that the round one data had revealed those critical concepts. This solidified the inference that the critical concepts were key elements to any decision about the existence of a CRU. A diagram was then constructed to help map data analysis and to aid in answering the research question.

Round One Analysis

Purpose. This broad category explores why the Air Force has MSFs in AMC TALCEs and CRUs. The responses grouped into this theme broke down into the sub-topic areas of mission, necessity, and effect. What emerged during analysis are two critical concepts that are illustrated in the sub-topic discussion below. These concepts are quick response and theater control. A quick response of MSFs is critical to mission success. Also, theater control of those MSFs is highly desired. Because these two

concepts emerged, they have an impact on answering the research question (see Appendix B).

Mission. Apart from the mission descriptions in Chapter 2, the interview questions asked for clarifications about CRU and AMC TALCE unit missions. The CRG is a unit designed for quick response to be replaced by follow-on forces in 14 days. “[CRUs] in each theater provide a rapid response to a crisis and not have [sic] to rely on personnel to deploy from CONUS.” In simple terms, “the role of a [CRU] is to establish an air terminal capable of receiving mobility aircraft, regardless of conditions.” Both CRUs and AMC TALCEs are expeditionary in nature, but “[AMC] TALCEs primarily support inter-theater operations, hence they are not theater assets.”

Necessity. When asked why the CRG was created, almost all of the respondents had the same basic answer. The CRG was created to support intra-theater airlift and logistics requirements, partly because of the perception that “AMC will only engage in support of [strategic] mobility,” but mostly because an “in-theater capability is more responsive to the theater CINC and AFFOR needs.” With regards to theater CINC autonomy, if a theater CINC owns a CRU, then he does not need to ask for any support from TRANSCOM, especially because “asset availability is a problem with TRANSCOM.” To use AMC assets, the theater AFFOR must request them to their CINC, who routes the request to the Joint Chiefs of Staff, who forwards it to TRANSCOM, who pushes it down to AMC TACC for processing. That process “is too slow” and “the process of validating and developing an AMC response is cumbersome on fast-breaking

contingencies.” The theaters want and need a faster response, and although “GAMSS is sufficient for day-to-day operations, it is not sufficient for contingency operations.” Because theater planners “don’t want to wait for AMC to respond to TPFDD [time-phased force deployment data] inputs,” the CRG was created “to have OPCON of a full TALCE and improve responsiveness.” Since the CRG concept “worked well in USAFE, it’s been sold to HQ USAF as a way to form a unit,” and a CONOPS has been written so other theaters can have a CRU as well. Some think that the CRU “is PACAF’s and USAFE’s attempt to create their own AMOG,” but others think that although the current AMOG structure works well under the two Major Theater War scenario, if that national military strategy changes in the near future, so, too, must the AMOG structure to incorporate CRUs into their operating philosophy.

Effect. The overall perception is that CRUs have “significantly reduced the TDY taskings for AMC,” although there is no hard data to support that claim. Also, some think the AMOGs are “underutilized, and could be even more so with the [CRUs].”

Capability. This broad category explores what the AMC TALCEs and CRUs provide to the CINCs. The responses grouped into the capability theme broke down into the sub-topic areas of ability, training/force packaging, and redundancy. What emerged during analysis are two critical concepts that are illustrated in the sub-topic discussion below. These concepts are unit cohesion and task dependency. Unit cohesion implies that multi-functionality and training provide a MSF capable of smoother operations and more varied missions. Task dependency means the task a MSF is supposed to perform

determines which MSF is better suited for the operation. Because these two concepts emerged, they have an impact on answering the research question (see Appendix B).

Ability. Responses naturally compared the abilities of a CRU and AMC TALCE. Some classified the CRU as having more speed in deployment because it is lighter and leaner than an AMC TALCE and requires less infrastructure to conduct operations. Also, the CRU has a more robust, inherent force protection ability than an AMC TALCE does. Other responses pointed out that the AMC TALCE has more command and control abilities than a CRU, and that an AMC TALCE's output is only limited by airfield capacity. As a contrast, a CRU's output is limited due to its leaner footprint.

Training/force packaging. Many respondents focused on the issues of training and force packaging. For example, the "TALCE portion [of the CRG] is trained, just as AMC TALCEs are trained, to handle all air mobility platforms that are scheduled to come their way (military, NATO, or civilian)." Some even consider the TALCE portion of a CRU to be incomparable to an AMC TALCE because of the cross-functional training concepts that a CRU employs. Some respondents focused on how the CRG is packaged, meaning all disciplines needed to open an airfield are a part of the CRG (TALCE, Security Forces, Contracting, Finance, etc.). One respondent said, "AMC has always had and trained for this capability (CRG), they just never packaged the entire thing under one group." This packaging of the CRG was explained as the Combat Air Force (CAF) method of packaging as opposed to AMC's approach to deploying TALCEs with separately sourced force protection and support functions. Of particular note, no

matter how the TALCE capability is packaged at Ramstein Air Force Base, Germany, the CRG needs the AMC TALCE located at Ramstein to complete their package just as much as the AMC TALCE needs the support functions at Ramstein (meaning the CRG) to complete their package to open an airfield.

Redundancy. As expected, there was a marked disagreement about redundancy. Some openly stated that the CRU duplicates what an AMC TALCE does. “The AMOGs are really CRU’s with another name. While they outsource their security forces, they do have access to them.” Some maintain that this redundancy fogs-up the seamlessness of the air mobility system maintained by TRANSCOM. Others acknowledge that there is redundancy, but that the redundancy is needed so theaters can independently respond to theater situations without involving AMC. From a different perspective, respondents said that the CRG is not redundant to the AMC TALCE because the CRG as a whole performs many different missions, and the TALCE portion of the CRG just amplifies the CRG capabilities. Some respondents maintained that theater CRUs are not redundant, but truly are a part of the GAMMS, lending a complimentary capability to AMC TALCEs. The sheer fact that CRUs are owned by the AFFOR, to be used for a specific purpose, seemed to be enough of a difference from an AMC TALCE to banish the idea of redundancy.

Solutions. The responses for possible solutions fell into the three topic areas of no CRUs, maintaining current structure, and creating robust theater CRUs. The critical concepts influenced the formulation of these solutions.

No CRUs. Those who maintain that AMC should control all TALCE capabilities do so under the theory that “CINC TRANSCOM should be the only one responsible for setting up an air mobility system as the one in charge of the defense transportation network.” Previous research papers have pointed out that TRANSCOM’s “partial control of the DTS does not allow it to sufficiently control the system for which it is held accountable” (29:2-3). One respondent supported this by saying, “We should operate on the one-boss concept.” With that in mind, AMC (acting for TRANSCOM) should be the only agency to set up the GRL strategy to execute an operation. “One center managing all the mobility assets for all the geographic CINCs and TRANSCOM would...provide one-stop-shopping for the DOD air mobility customers” (30:28).

Maintaining current structure. Currently, PACAF and USAFE have a CRU, each with a limited TALCE capability. These units have stood-up and have been used, so some say that “[CRUs] will remain...it’s too political.” Other respondents said that theaters should have their own TALCE capabilities to handle intratheater laydown operations, so both CRUs and AMC TALCEs are needed. “The key is which TALCE (AMC or CRU) will handle theater vice strategic airlift. [A CRU] is better suited to support a tactical operation. An AMC TALCE is better suited for the global reach mission, to be moved as the strategic mission moves, not the tactical mission.” So the solution here is to maintain the current structure and develop operational level doctrine to integrate the two units to achieve a seamless mobility support architecture. One basic approach is to only use AMC TALCEs to work Intermediate Support Bases (ISB) which usually

have a higher MOG and handle mostly strategic airlift, while a CRU works at a Forward Operating Base (FOB) to support the tactical airlift into the base in a higher threat area. To support the command and control of these CRUs, “each theater should have a command and control element like an AMOCC to control its use and coordinate with TACC for planning GRL.” Some maintained that “GAMSS doesn’t need to be redesigned. Instead, theater AMOCCs must work with TACC, and AMC must trust the theaters and work with them for GRL.” So it seems that the AMOCCs would need to become more involved with TACC to clarify how their CRUs and AMC TALCEs will integrate. Furthermore, “AMC should remain the lead for training, policy, etc., but AMCI 10-202 Volume 4 (TALCE Operations) should become a multi-command regulation,” because “unless the [CRUs] were trained and equipped by AMC, there would be great difficulties in standardization and compatibility with existing systems.”

Creating robust theater CRUs. A final solution is to give the theaters a robust TALCE capability so they can function without falling back on AMC to provide support for theater operations. A previous research paper pointed out that “what is lacking in the theater airlift system is the amount and quality of support infrastructure” (3:67). A respondent agreed by saying, “AMC should have put AMOGs in the theaters, too.” USAFE and PACAF already have started to make CRUs, but there is no ACC CRU to support operations for CENTCOM or SOUTHCOM. “Little Rock, Pope and Dyess AMCFs [Air Mobility Control Flights] could easily be packaged under the [CRU] construct, with the 820th Security Forces Group at Moody AFB, to get an ACC [CRU] in the CONUS.”

Along with that thought, the CONUS AMOGs could send one full TALCE (if not more) to PACAF and USAFE to beef-up the theater capability. The AMOGs would still maintain a capability in the CONUS to respond to strategic mobility support requirements, ensuring that AMC positions at the permanent enroute structures do not deploy. Earlier research papers agree with this concept.

The individual pieces already exist within each theater. They only need to be packaged in a more applicable manner. This arrangement would, to some degree, be redundant with AMC's current capabilities. However, one must keep in mind that the decision to move theater airlift back to the theater commander was intentional. For theaters to appropriately utilize a theater airlift capability, the deployable support concept must be included. Therefore, redundancy is appropriate in this circumstance since it increases the overall flexibility of the US military. (28:27)

Critical Concepts

Table 3 summarizes the three themes, along with their sub-categories, used for organizing round one analysis. The brief data descriptions are representative of all 73 responses. Not all 73 responses are listed because many of them were duplicated among the respondents. The critical concepts are listed at the bottom of this table.

As previously stated, the critical concepts emerged from the data that was originally grouped for organization. The detailed data in the earlier sections of this chapter describe in better detail than the above table the bases from which the critical concepts were drawn. These critical concepts that emerged out of round one analysis seemed to have some influence on the emergence of CRUs in the Air Force, but round two analysis proved to solidify that thought.

Table 3. Summary of Round One Analysis Themes

PURPOSE	CAPABILITY	SOLUTIONS
Mission <ul style="list-style-type: none"> - CRU quick-entry - CRU 14-day force - TALCEs intertheater - Both expeditionary - Establish air terminal 	Ability <ul style="list-style-type: none"> - CRU 1 aircraft/day - CRU has speed and force protection - AMC TALCEs limited by airfield - CRU lacks comms - AMC TALCE is heavier 	No CRUs <ul style="list-style-type: none"> - Only TRANSCOM responsible for setting up air mobility system - One-boss concept
Necessity <ul style="list-style-type: none"> - AMC TALCE only for strat mobility - AMC tasking is too slow - In-theater capability is more responsive - CRU for intratheater - Command relations and OPCON of TALCEs - 2 MTW structure might change 	Training/Force Packaging <ul style="list-style-type: none"> - Training is similar, packaging is different - CRU has cross-functional representation - CRU and AMC TALCE functions are not comparable 	Maintain Current Structure <ul style="list-style-type: none"> - Both are needed - AMOCCs are essential - AMC lead for training policy - AMC TALCEs for ISB, CRU for FOL - Too political, CRUs will remain
Effect <ul style="list-style-type: none"> - CRU decrease TALCE TDYs - AMOGs underutilized 	Redundancy <ul style="list-style-type: none"> - They're complimentary - AMOGs are CRUs by another name - CRU duplicates what AMC TALCE can do 	Create Robust Theater CRU <ul style="list-style-type: none"> - Combine Little Rock, Pope and Dyess to get a CONUS CRU - Need theater AMOGs
Critical Concepts <ul style="list-style-type: none"> - Quick Response - Theater Control 	Critical Concepts <ul style="list-style-type: none"> - Unit cohesion - Task dependent 	

Round Two Analysis

Quick Response. All respondents agreed that the theaters' needs for quick responses were a key factor in the development of the CRU concept. Some believe that

the distance of strategic lift assets based in the CONUS from theater AOR bases is more of a driving factor behind theater based forces than anything else. “A EUCOM unit could deploy [its] stuff quicker and cheaper by using three C-130 loads from Ramstein versus a longer deployment time and [more expensive] C-5s/C-141s/C-17s all the way from the CONUS.” Some believe that relying solely on C-130 lift is not very efficient, especially when moving forces from Europe all the way into southern Africa, in which case strategic lift assets from the CONUS would be just as timely. All believe that technically speaking, strategic lift assets have just as good of a response time as tactical lift assets; however, speed of deployment is sometimes affected more by “the red tape than actual response time.” All in all, it seems that the perception of slow response times by CONUS-based strategic lift assets (which are needed to deploy AMC TALCEs from the CONUS) is determined more by the process of requesting and tasking those assets than by the actual response of those assets once tasked.

Theater Control. Theaters already have tactical airlift assets. To improve upon response time, they also want control of support forces needed to on-/off-load those airlift assets. Having MSF embedded in the CRU gives the theater that control, otherwise they have to request MSF from AMC. Although theater control of MSF is one answer, AMC’s tasking procedures are not solely to blame. One respondent said,

A common complaint is to blame AMC for being slow to respond...the AFFOR or theater CINC’s ability to quickly define the requirement is a bigger issue. If you take 2-3 days to define your requirement, and then expect [airlift and MSF] to be there the next day, it’s not going to happen.

A CRU gives a theater commander more than just MSF, but acts as a “door opener if the Air Force is deploying forces” to the CINC’s AOR. Again, the concept of giving theater

commanders the capability to respond to crises in their theater as they see fit emerges. “Each CINC needs access to a CRU. Initial response by theater-assigned forces makes sense. However, if the scope of the crisis exceeds theater capabilities, a CONUS-based force may be needed.” When that happens, when CONUS-based AMC TALCE forces must work with CRU MSF for the same operation, they lack guidance about how to effectively work together to support both theater CINC requirements and the DTS.

Unit Cohesion. One of the benefits of a CRU is the fact that the MSF forces within the CRU train along with the other specialties of the CRU to develop teamwork and synergy. This translates to smooth operations when the CRU must deploy on short notice. As an example, “the CRG combines all the resources necessary to support ‘expeditionary’ operations. By combining all the necessary AFSCs in one organization, the CRG is a team from day one.” This concept is very different from the norm. As one respondent put it,

The Air Force presents forces in a very haphazard way compared to other services...other services deploy units with integral security, vehicles, medical teams, lawyers, cooks, civil engineers, communicators, intelligence, counter-intelligence, targeteers, etc., who have trained for years together and are commanded by the same commander they are under every day.

This concept differs from the current Air Expeditionary Force (AEF) method for deployment management that the Air Force currently uses. “The AEF construct mirrors the [AMC] TALCE way of doing business – identify UTCs [Unit Type Codes] to provide a specific capability, assemble these UTCs, and then send them on their way.” Each concept has its merits and fallbacks. Specifically, the CRU concept could hinder specialty training management since the unit has so many diverse AFSCs associated with it. The AMC TALCE/AEF brings together small numbers of personnel from different

bases on short notice to operate in support of a crisis. This sometimes causes confusion about chains-of-command, and builds a force lacking in synergy (an example is an AMC TALCE from McGuire AFB, New Jersey, augmented by security forces from Charleston AFB, South Carolina). However, this is the “approved” Air Force deployment method.

Task Dependent. Respondents pointed out that the CRU concept encompasses more missions than just airlift support. “The difference between an [AMC] TALCE and a [CRU] is that the [AMC] TALCE is focused on supporting air mobility operations, whereas the [CRU] role encompasses not only the airflow, but also establishing the reception base.” “If GRL is the only need, send in the [AMC] TALCE. If a contingency base must be established, the CRU should be tasked to respond.” “To AMC senior leadership, the [AMC] TALCE is the AMC organization forward deployed to support operations at austere airfields.” It is clear that the determination of which organization is best suited for tasking is dependent upon the mission that must be accomplished. The CRU is for quickly assessing a situation and establishing a contingency base, and they are manned to do just that...not just manned to provide air mobility support. They have that capability so they can “get the ball rolling” when they arrive at a location. “The [CRU] TALCE and mobile aerial port are not a long term, major airlift support capability. They wear out fast, and they are doing other jobs besides airlift offload and [command and control].” For longer operations, or purely air mobility operations, AMC TALCEs would be better suited to do the job.

Effect of Critical Concepts on Alternate Solutions. The critical concepts influence all three alternate solutions from round one, as shown in Figure 2.

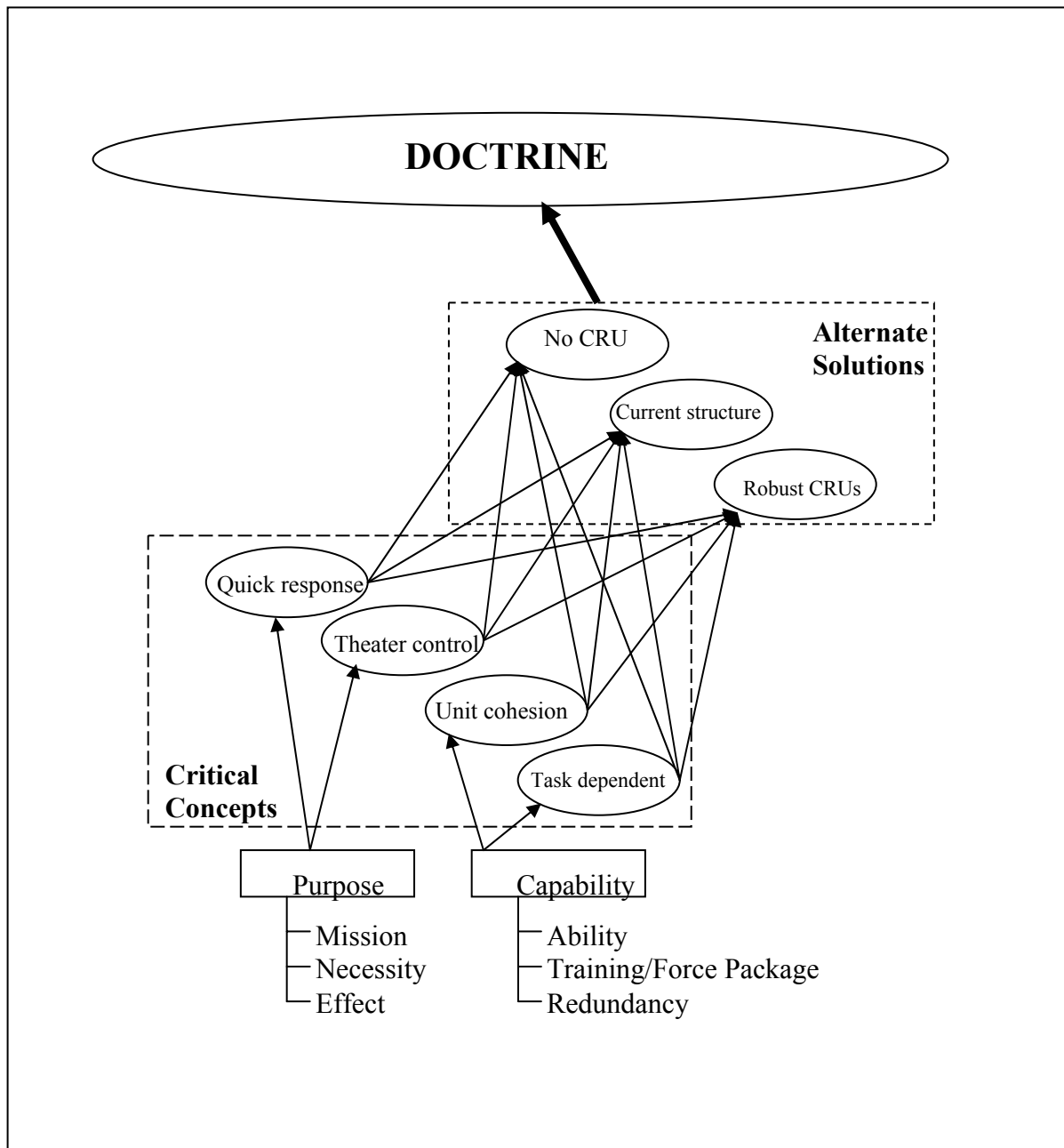


Figure 2. Factors to Consider in the TALCE / CRU Trade-off

Using the “No CRU” solution as an example, one would assume by quickly looking at the diagram that opting for no CRU would place less emphasis on the necessity of a quick

response (because having a CRU in the theater decreases MSF response time). This is not the case and is a total misinterpretation of the significance of the critical concept. A critical concept has an influence on the acceptance of an alternate solution. Opting for no CRU does not mean that a quick response is not needed, but that the current system provides a response that is quick enough to meet the needs of the Air Force and theater CINCs when the benefits and drawbacks of the other critical concepts are taken into account. In other words, each critical concept is a factor that must be considered when the merits and disadvantages of the alternate solutions are compared to determine the optimal structure for the Air Force. For this reason, in Figure 2, an arrow has been drawn from the critical concept to all alternate solutions, in order to show that there is consideration of that critical concept in the process of determining a solution. All aspects of the critical concepts, as described by the data presented in this chapter, must be considered when determining the best structure.

Chapter 5: Findings and Conclusion

Review

This chapter will expand on the issues brought forth from Chapters 2 and 4 in order to answer the research question repeated here for continuity and focus: Based upon the emergence of new units (the CRG) and concepts (the CRU), should the Air Force change its operational level doctrine about the support of MAF, and if so, how should the doctrine be changed to best meet the requirements of the Expeditionary Air Force?

Unit capabilities of AMC TALCEs, the CRG, and CRUs were described in Chapters 2 and 4. Chapter 2 also provided a few possible reasons why the CRG/CRU concept was developed. Chapter 4 expanded on that literature review by providing personal opinions of respondents familiar with the issues. Also in Chapter 4, those respondents provided alternate force structure solutions for CRU and AMC TALCE units. All of this information sets the stage to discuss the research question.

Discussion

Answering the research question requires consideration of the critical concepts, as well as the alternate solutions, defined in Chapter 4.

Quick Response. The EAF concept is dependent upon light, lean forces capable of a quick response. Air Force units are moving to build the capability to respond faster, and AMC TALCEs are known for being the first units into an airfield. In fact, AMC TALCE units normally deploy well in advance of published Deployment Orders which authorize Air Force units to deploy, a necessity so airlift can off-load those other Air Force units. The EAF concept is also dependent upon the airlift mode of transportation to

move forces around the globe quickly. A key element to the EAF equation is the presence of theater-assigned forces to react immediately to crises while CONUS-based forces are moved into the AOR. Although this concept was usually used for combat forces, it is being used for MSF with the advent of CRUs. Because distance and limited airlift aircraft are obstacles to moving CONUS-based forces, theaters have their tactical airlift to use in response to those crises. Because theaters have airlift, they also need an airlift support capability. Thus, theater controlled MSFs are a good and practical idea.

All units have the capability to respond quickly; the key factors which slow down responsiveness are coordination efforts (as depicted in Figure 1), distance, and airlift availability. Theater MSFs reduce the effects of two of these factors, only if the operation is on a small scale that does not require additional forces from the CONUS (and thus AMC TALCE forces to handle strategic airlift staging bases), and if all needed equipment can fit on tactical airlift. If a crisis in a theater is a great distance away from the MSF (for example, from Germany to South Africa), then response time from the CONUS using strategic airlift would be almost the same as the response time using strictly theater assets.

Theater Control. A CRU is much more than a theater MSF. A CRU is structured to support itself and provide limited, initial support for other units. It is not designed to operate an ISB for an extended amount of time, but to assess the airfield and provide support to initial operations. The CRU is designed to give the theater CINC control of MSF assets to use as needed to support the theater mission. AMC TALCEs belong to TRANSCOM to provide support on a strategic level to all theater CINCs, even at the same time. Large air mobility operations would require AMC TALCEs merely because

the operations transcend the theater/strategic delineation.. The distinct differences in unit missions, and who is better at controlling those missions, must remain clear when developing doctrine.

Unit Cohesion. Unit cohesion is a good concept. However, the CRU concept seems to fall out of line with mainstream Air Force force structuring principles. The Air Force just developed the AEF as its means to deploy forces. This structuring calls for the deployment of pieces of capability, from different bases, to establish either a force, or base, to bring to bear air forces to the fight. This new method relies upon standardized training and readiness measurements to develop a flexible force capable of deploying to any environment, under any command structure, to perform the duties necessary to provide the theater CINC their unique capabilities. The CRU packaging method doesn't quite fit this mold, creating a dichotomy of Air Force deployment force structuring. Of note, regarding the strategy and structure discussion in Chapter 2, because lower levels of the organization are creating structures to meet their needs, higher levels of leadership must take note of this to see if their strategy needs to change. Although structure should follow strategy, feedback is needed to determine if the strategy is effective; it is possible that in the case of the CRU, a changing structure reflects defects in the strategy.

Task Dependent. The fact that MSFs are embedded into the CRU causes a redundancy. Wherever there is redundancy, there is room to improve efficiency, however it is unknown what unit (CRU or AMC TALCE) needs to improve. Instead of units improving efficiency, the structure of GAMSS could need to be improved by adding CRU MSFs into the equation. Force structuring of MSFs must be re-examined, to the point that serious consideration must be given to the option of giving theaters more MSF

capability. This would allow the theater to take care of itself while allowing AMC MSFs to concentrate on the strategic portions of GRL as well as to support the two theater CINCs who do not have permanent forces in their AOR.

Recommendations

The research question posed in this paper was two-fold. The first part asked if Air Force operational level doctrine should change. The second part asked how the doctrine should change if it did need to be changed. The second part implied that this paper would develop a recommendation about MSF force structuring. However, the purpose of this paper was not to dictate Air Force force structuring policy, but to address the perception of confusion that seemingly redundant unit capabilities cause. To properly address this issue, alternative ideas about the force structuring of MSFs need to be addressed, but the determination of the best structure for the Air Force goes beyond the scope of this paper. The table below summarizes the pros and cons of the three alternate solutions presented.

Table 4. Pros and Cons of Alternate Solutions

Solution	Pros	Cons
No CRU	Centralized management and training, few MOG limitations,	Slower response to theater, OPCON to TRANSCOM, focused only on strategic airlift support
Current Structure	Rapid response of limited capability, OPCON to theater, multi-tasking allows for lighter footprint	High MOG limitations, difficulty managing training requirements
Robust CRU	Rapid response in theater, less deployment from CONUS, responsive to AFFOR needs, OPCON to theater, can handle high MOGs	Training not focused on specialty tasks, focused only on theater airlift support

These pros and cons were not truly stated by any of the interview respondents, but are summarized from all of the data presented in this paper. It is understood that the pros and cons do not always hold true, all possible pros and cons are not listed, and they are generalizations set forth for the purpose of illustration. That purpose is to show that there are trade-offs for these solutions that need to be explored further before any solid conclusion about which solution is the best can be drawn.

Air Force operational level doctrine does need to be changed. But before that can happen, Air Force leaders need to determine a strategy about MSFs. It is obvious that CRUs have proven their worth and will continue to be used by the theaters. This needs to be taken into consideration as MSF strategy is developed as well as the supporting structure to that strategy. Serious consideration must be given to theater-owned MSFs as long as there are theater-owned airlift resources. Once strategy and structure are developed, then operational level doctrine can be developed. This is necessary to avoid the current problems that exist without governing doctrine. Operational level doctrine will define which MSF is responsible for specific missions, and how the two MSFs will operate together to support both theater CINC requirements and the DTS.

Conclusion

It may seem that this paper addresses many issues without really solving a problem. The research question for this paper asked if doctrine needed to change, and the research for this paper focused on finding an answer to that question. The true nature of the CRU versus AMC TALCE issue is in itself very complicated. Each entity provides a capability for somewhat different purposes, although at times it seems as each one really

performs the same mission. This confusion is due to the introduction of a structural change (the CRG/CRU) without a corresponding change in strategy. The lack of some overarching directives about how the CRU MSFs fit into the DTS, if at all, is detrimental to smooth operations across command lines. Above all else, even if Air Force leadership refuses to fully address the strategy and structure issues that CRUs bring to the table, they must develop operational level doctrine that incorporates how the CRU MSFs fit into the overall DTS. Otherwise, future operations will have the same aura of confusion about MSFs as past operations.

Limitations and Future Research. As stated, the research question limited the scope of this paper. Although alternate solutions about how to structure the Air Force's MSFs (CRUs or AMC TALCEs) were addressed, they were used strictly to draw data. The critical concepts were pulled from the research data, but the data could not support a determination of the strength of those constructs; future study might be able to determine which critical concepts hold more influence over the structuring of MSFs. Even if the focus was on finding a structure solution, a true recommendation could not be made until Air Force leadership determined if GAMSS would include CRU MSFs (strategic-level doctrine/strategy). Once that happens, then research could focus on finding the optimum mixture of MSFs in CRUs and AMC TALCEs to maximize the benefit to all CINCs (structure). Then, doctrine could be developed to outline how those forces would work together within the GAMSS (operational-level doctrine/strategy). Further study is not recommended until the strategic-level doctrine is determined.

Appendix A: Interview Questions

AFPC Interview Control Number: SCN 01-008, expires 1 July 2001

1. Name, rank, contact info, duty title, brief duty history
2. How familiar are you with: TALCE operations? TALCE doctrine? GAMSS? Summarize their definitions. Have you worked in a TALCE, for how long?
3. How familiar are you with: CRG operations? CRG doctrine? Summarize their definitions. Have you worked in a CRG, for how long?
4. What are the significant differences between the CRG and TALCE? What are the similarities? Are the aerial port operations functions different in terms of capability and response, and if so, what are they?
5. There's movement in the AF to standardize CRGs and provide a CRG for each theater CINC. What do you think prompted this? How does your MAJCOM support this initiative? How does you MAJCOM propose interface of the CRG with TRANSCOM? Please provide details.
6. How would you describe the CINC's working relationship with TRANSCOM? What offices at TRANSCOM do you interface with and how often? What problems do you encounter when dealing with TRANSCOM?
7. How does the CRG support of the EAF compare with the TALCE support of the EAF? What are the advantages and/or disadvantages of using them to support the EAF? Theater operations?
8. How does your command feel about the ability of Global Air Mobility Support System (GAMSS) doctrine to support future theater operations? Why?
9. Does your command know how TALCEs are included in the Lead Mobility Wing (LMW) concept? Describe how? Do you know what the LMW concept is? Briefly describe it.
10. How does your MAJCOM's CRG concept differ from: current TALCE/GAMSS doctrine? Future TALCE/LMW doctrine?
11. Do you think each CINC needs a CRG? Why? If so, how will they be manned and equipped? Will the current GAMSS be cannibalized to make the CRG concept work?

12. Do you think the advent of theater CRGs creates a redundancy of TALCE capabilities under current GAMSS doctrine? Why or why not? Do we need both capabilities?
13. What would be the benefits for using a TALCE vs. a CRG for a theater contingency, and vice versa?
14. Should GAMSS be redesigned: to designate complimentary missions of TALCEs and CRGs? To eliminate current TALCE concept? Or to eliminate CRGs and keep TALCEs? What is your viewpoint about how the two entities of TALCEs and CRGs should co-exist, if at all, and how should doctrine reflect that?
15. Have you seen the ACC proposal for a USAF CRU? What do you think of the concept of the CRU as an assessment team only? Does that concept create a redundancy with LMW? Would having this new CRU increase response time into the theater (of forces)? Would the CRU help AMC planners determine the correct mix of mobility support forces?

Appendix B: Acronym List

ACC – Air Combat Command (Air Force MAJCOM)
AEW – Air Expeditionary Wing
AEF – Air Expeditionary Force
AFDC – Air Force Doctrine Center
AFFOR – Air Force Forces
AFSC – Air Force Specialty Code
ALCF – Airlift Control Flight
AMC – Air Mobility Command (Air Force MAJCOM)
AMCI – Air Mobility Command Instruction
AMOCC – Air Mobility Operations Control Center
AMOG – Air Mobility Operations Group
AMS – Air Mobility Squadron
AOI – Airlift Operating Instruction
AOR – Area of Responsibility
CAF – Combat Air Forces
CENTCOM – United States Central Command (Unified Command)
CINC – Commander-in-chief
CONUS – Continental United States
CRG – Contingency Response Group (existing unit)
CRU – Contingency Response Unit (theoretical unit)
DOD – Department of Defense
DTS – Defense Transportation System
EAF – Expeditionary Air Force
EUCOM – United States European Command (Unified Command)
FOB – Forward Operating Base
GAMSS – Global Air Mobility Support System
GRL – Global Reach Laydown
HQ USAF – Headquarters, United States Air Force
IRT – Initial Response Team
ISB – Intermediate Support Base
JCS – Joint Chiefs of Staff
JFCOM – United States Joint Forces Command (Unified Command)
LMW – Lead Mobility Wing
MAF – Mobility Air Forces
MAJCOM – Major Command
MOG – Maximum on Ground
MSF – Mobility Support Forces
MST – Mobility Support Team
NATO – North Atlantic Treaty Organization
NCA – National Command Authorities
OPCON – Operational Control

PACAF – Pacific Air Force (Air Force MAJCOM)
SFG – Security Forces Group
SOUTHCOM – United States Southern Command (Unified Command)
TACC – Tanker Airlift Control Center
TACON – Tactical Control
TALCE – Tanker Airlift Control Element
TCE – Transaction Cost Economics
TDY – Temporary Duty
TPFDD – Time Phased Force Deployment Data
TRANSCOM – United States Transportation Command (Unified Command)
USAFE – United States Air Forces, Europe (Air Force MAJCOM)
UTC – Unit Type Code

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Vita

Captain Karen D. Stoff was born in Emporia, Kansas. She entered the United States Air Force Academy in June 1987, and graduated in May 1991 with a Bachelor of Science degree in Geography and a minor in French. Her first assignment was at Williams AFB, Arizona, as a Squadron Adjutant in both the 98th and 99th Flying Training Squadrons. In April 1993, she was assigned to the 38th Rescue Squadron at Osan Air Base, South Korea, to perform the same duties. She returned to the CONUS in April 1994 to Langley AFB, Virginia, to work in the Air Force Rescue Coordination Center as a Search and Rescue Controller and Shift Supervisor, and she completed a Masters of Science degree in Human Relations from the University of Oklahoma in May 1996. In December 1996, she deployed to Riyadh, Saudi Arabia to work in the Joint Task Force Southwest Asia J3 Joint Search and Rescue Center.

Upon her return to Langley AFB, Virginia, in April 1997, Captain Stoff cross-trained to Logistics Plans, was assigned to the 1st Logistics Support Squadron, and became the Logistics Plans Flight Commander. In August 1998, she moved to Beale AFB, California, to perform the same duties in the 9th Logistics Support Squadron. In April 1999, she deployed to Einseidlerhof, Germany, to work in the J5 of Joint Task Force Shining Hope to support humanitarian operations in Albania. In May 2000, she entered the Advanced Studies of Air Mobility program, Air Force Institute of Technology, at the Air Mobility Warfare Center, Ft Dix, New Jersey. Upon graduation, in July 2001, she will be assigned to Osan Air Base, South Korea, as 7th Air Force Chief of Logistics Plans, and will return to the CONUS in July 2002, to Miami, Florida, to work in the USSOUTHCOM J4.

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